

ELECTROCHEMICAL DETECTION METHOD OF GENE AND APPARATUS THEREFOR

Patent number: JP9288080
Publication date: 1997-11-04
Inventor: TAKENAKA SHIGEORI
Applicant: SHINNITSUKA KANKYO ENG KK;; TAKENAKA SHIGEORI
Classification:
- **international:** G01N27/327; G01N27/06; G01N33/483; G01N33/58
- **european:**
Application number: JP19960102957 19960424
Priority number(s): JP19960102957 19960424

Abstract of JP9288080

PROBLEM TO BE SOLVED: To enable detection of a DNA sequence without fragmentation by a method wherein a DNA probe modified with a conductive substance is immobilized on an electrode and caused to react with a material containing DNA with the presence of an intercalater to detect an electrode current after the reaction. **SOLUTION:** A probe DNA employing DNA extracted from a living being sample or DNA chemically synthesized is modified by a conductive substance such ferrocene and immobilized on an electrode made of gold, glassy carbon or the like. The electrode is introduced into an specimen solution containing a DNA sample to form a hybrid DNA with the presence of an intercalater such as ferrocene compound. The amount of a current flowing through the electrode changes by the intercalation and the amount of the current is measured to determine the quantity of the hybrid DNA. This method eliminates the need for a division device or the like thereby enabling detection and measurement of a DNA of a specified sequence simply.

Data supplied from the esp@cenet database - Worldwide

(19)日本国特許庁 (JP)

(12) 公開特許公報 (A)

(11)特許出願公開番号

特開平9-288080

(43)公開日 平成9年(1997)11月4日

(51) Int.Cl. ⁶	識別記号	序内整理番号	F I	技術表示箇所
G 01 N	27/327		G 01 N 27/30	3 5 1
	27/06		27/06	Z
	33/483		33/483	F
	33/58		33/58	A

審査請求 未請求 請求項の数7 O.L (全6頁)

(21)出願番号 特願平8-102957	(71)出願人 000146755 株式会社新日化環境エンジニアリング 福岡県北九州市戸畠区中原先の浜46番地の 80
(22)出願日 平成8年(1996)4月24日	(71)出願人 596057011 竹中 繁織 福岡県粕屋郡古賀町千鳥1-3-15-203 (72)発明者 竹中 繁織 福岡県粕屋郡古賀町千鳥1-3-15-203 (74)代理人 弁理士 山本 秀策

(54)【発明の名称】 遺伝子の電気化学的検出法およびその装置

(57)【要約】

【課題】簡便な感度のよいDNAの検出、測定を行うこと

【解決手段】導電性の物質で修飾されたDNAプローブが固定された電極と、DNAを含む試料とをインタークレータ存在下に反応させ、該DNAプローブとDNAとのハイブリッドDNAを形成させる、該反応後の電極の電流を検出および/または測定する。